INDEX TO VOLUME 47

An asterisk (*) denotes the abstract of a paper presented before the Academy or an affiliated society.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

Anthropological Society of Washington. 391.
Philosophical Society of Washington. 25.

AUTHOR INDEX

ALLARD, H. A. The stridulations of some crickets in the Dominican Republic. 150.
BARBER, EDWARD S. The role of the civil engineer in soil mechanics. 218.
BAUMGARDT, ERNEST. The quantum character of light and its implications on visual thresholds. 133.
BAYER, FREDERICK M. Additional records of Western Atlantic octocorals. 379.
BLAKE, S. F. Two new genera of Compositae from Peru and Costa Rica. 407.
BRICKWEDDE, F. G. *Temperatures in atomic explosions. 29.
BROIDA, H. P. *Stabilization of free radicals at low temperatures. 30.
BROWN, JERRAM L. A key to the species and subspecies of the cyprinodont genus *Fundulus* in the United States and Canada east of the continental divide. 69.
BROWN, ROLAND W. Cockroach egg case from the Eocene of Wyoming. 340.
BURNETT, G. E. Civil-engineering research. 206.
BYRNS, F. E. The role of the civil engineer in irrigation. 215.
COOK, RICHARD K. Some properties of Struve functions. 365.
CRABILL, RALPH E., JR. A new *Garibius* from Virginia, with a key to the North American congeners (Chilopoda: Lithobiomorpha: Lithobiidae). 375.
———. On the Newport chilopod genera. 343.
DIEHL, WALTER S. Some considerations of disaster potential. 398.
DRECHSLER, CHARLES. Two medium-sized species of *Conidiobolus* occurring in Colorado. 309.
DUNNING, GORDON. Immediate radiations from a nuclear detonation. 189.
EISENBUD, MERRIL. Global distribution of radioactivity from nuclear detonations, with special reference to strontium 90. 180.
FAUST, GEORGE T. A study of the montmorillonite variety galapektite. 143.
———. The relation between lattice parameters and composition for montmorillonite-group minerals. 146.
GALE, SAMUEL H. The role of the civil engineer in applied economics. 235.
GENTNER, WALTER A. New species of *Erythroxylon* from Colombia. 6.
GIBSON, R. E. Cultural implications of scientific research. 249.
GOIN, COLEMAN J. Descriptions of two new frogs from Colombia. 60.
GOLDMAN, A. J. A matrix minimization problem. 405.
GRANUM, JAMES O. The role of the civil engineer in highways. 222.
GURUMANI, O. N. See NAIR, N. BALAKRISHNAN. 157.
HALL, H. TRACY. Chemistry at high pressures and high temperatures. 300.
HAND, CADET. Another sea anemone from California and the types of certain Californian anemones. 411.
———. The systematics, affinities, and hosts of the one-tentacled, commensal hydroid *Monobrachium*, with new distributional records. 84.
HESS, W. C., and SHAFFRAN, I. P. The effect of cortisone on the formation of glycogen from 2-C-14 labeled alanine and lactic acid. 17.
HILL, TERRILL. *A model for muscular action on a molecular level. 31.
HOFFMAN, RICHARD L. A new name for the race-runner lizard of the Middle Atlantic States (Tejidae). 423.
———. A new subspecies of the teiid lizard *Cnemidophorus sexlineatus* (Linnaeus) from eastern United States. 153.
IMLAY, RALPH W. New genera of Early Cretaceous ammonites from California and Oregon. 275.
JONES, R. CLARK. On the quantum efficiency of scotopic and photopic vision. 100.
KAPLAN, JOSEPH. *The International Geophysical Year program of the United States. 26.
KNIGHT, KENNETH L. See STONE, ALAN. 42, 117, 196.
LI, HUI-LIN. New plant names published by Luigi Castiglioni. 1.
———. The evolutionary significance of the endosperm and its bearing on the origin of angiosperms. 33.
LOEBLICH, ALFRED R., JR., and TAPPAN, HELEN. *Woodringina*, a new foraminiferal genus (Heterohelicidae) from the Paleocene of Alabama. 39.
———. The new planktonic foraminiferal genus *Tinophodella*, and an emendation of *Globigerinita* Bronnimann. 112.
MACCORD, HOWARD A. Archeology of the Anacostia Valley of Washington, D. C., and Maryland. 393.
MACHTA, LESTER. Meterological factors affecting spread of radioactivity from nuclear bombs. 169.
MARCUS, MARVIN. A determinantal inequality of H. P. Robertson, II. 264.
———. A note on values of a quadratic form. 97.
MARSHALL, NORTON L. See SISLER, HUGH D. 321.
MAYER, JOHN R. *Science and the secondary schools. 25.
MCDONALD, C. C. The role of the civil engineer in hydraulics. 211.
MUCHMORE, WILLIAM B. Some exotic terrestrial isopods (Isopoda: Oniscoidea) from New York State. 78.
NAIR, N. BALAKRISHNAN, and GURUMANI, O. N. *Teredo* (*Nototeredo*) *nambudalaiensis*, a new shipworm from the Madras coast of India. 157.

NARDONE, ROLAND M. The electrogram of the turtle heart in situ and after isolation. 109.
NEWMAN, MARSHALL T. The physique of the Seneca Indians of western New York State. 357.
O'KEEFE, JOHN A. Tradition and conceptive selection. 273.
PENNEY, JAMES T. *Spongilla discoides* Penney: A correction. 24.
PERLOWAGORA-SZUMLEWICZ, ALINA, and VON BRAND, THEODOR. Studies on the oxygen consumption of *Australorbis glabratus* eggs. 11.
PETTIBONE, MARIAN H. A new polychaetous annelid of the family Paraonidae from the North Atlantic. 354.
———. North American genera of the family Orbiniidae (Annelida: Polychaeta), with descriptions of new species. 159.
PURI, HARBANS S. Notes on the ostracode subfamily Cytherideidinae Puri, 1952. 305.
———. Postscript notes on the ostracode subfamily Brachycytherinae. 306.
REED, CLYDE F. Contributions to the herpetofauna of Virginia, 2: The reptiles and amphibians of Northern Neck. 21.
———. Contributions to the herpetology of Maryland and Delmarva, 12: The herpetofauna of Anne Arundel County, Md. 64.
———. Contributions to the herpetology of Maryland and Delmarva, 15: The herpetofauna of Somerset County, Md. 127.
———. Contributions to the herpetology of Virginia, 3: The herpetofauna of Accomac and Northampton Counties, Va. 89.
ROBERTSON, ROBERT. The subgenus *Halopsephus* Rehder, with notes on the Western Atlantic species of *Turbo* and the subfamily Bothropomatinae Thiele. 316.
ROBY, HARRISON G. The role of the civil engineer in power. 238.
SAUNDERS, J. B. Emendation of the foraminiferal genus *Palmerinella* Bermudez, 1934, and erection of the foraminiferal genus *Helenia*. 370.
SHAFFRAN, I. P. See HESS, W. C. 17.
SHALOWITZ, A. L. Alexander Dallas Bache—pioneer American scientist. 267.
SHOPE, JOHN G. The role of the civil engineer in structures. 226.
SIMPSON, R. H. * Aircraft instrumentation and recorders for hurricane investigation. 27.
SISLER, HUGH D., and MARSHALL, NORTON L. Physiological effects of certain fungitoxic compounds on fungus cells. 321.
SLAWSKY, Z. I. * High speed gas dynamics. 28.
STONE, ALAN, and KNIGHT, KENNETH L. Type specimens of mosquitoes in the United States National Museum: IV, The genus *Culex* (Diptera, Culicidae). 42.
———. Type specimens of mosquitoes in the United States National Museum: V, The Sabethini (Diptera, Culicidae). 117.
———. Type specimens of mosquitoes in the United States National Museum: VI, Miscellaneous genera, addenda, and summary. 196.
STRIMPLE, HARRELL L. Two aberrant crinoid specimens. 369.
TAPPAN, HELEN. See LOEBLICH, ALFRED R., JR. 39, 112.
TAUSSKY, OLGA. A determinantal inequality of H. P. Robertson, I. 263.
THOMPSON, MORRIS M. See WHITMORE, GEORGE D. 241.
TRESSLER, WILLIS L. The Ostracoda of Great Slave Lake. 415.
VON BRAND, THEODOR. See PERLOWAGORA-SZUMLEWICZ, ALINA. 11.
WADE, MARY. Morphology and taxonomy of the foraminiferal family Elphidiidae. 330.
WALD, GEORGE. * The mechanism of quantum sensitivity. 32.
WALTHER, CARL H. The dual role of engineering mechanics. 229.
WHITMORE, GEORGE D., and THOMPSON, MORRIS M. The role of the civil engineer in surveying and mapping. 241.
WOOD, LAWRENCE A. * Elasticity of rubber. 25.
———. The elasticity of rubber. 281.
YEATMAN, HARRY C. A redescription of two parasitic copepods from Bermuda. 346.

SUBJECT INDEX

Anthropology. The physique of the Seneca Indians of western New York State. MARSHALL T. NEWMAN. 357.
Archeology. Archeology of the Anacostia Valley of Washington, D. C., and Maryland. HOWARD A. MACCORD. 393.
Biochemistry. * A model for muscular action on a molecular level. TERRILL HILL. 31.
The effect of cortisone on the formation of glycogen from 2-C-14 labeled alanine and lactic acid. W. C. HESS and I. P. SHAFFRAN. 17.
Botany. New plant names published by Luigi Castiglioni. HUI-LIN LI. 1.
New species of *Erythroxylon* from Colombia. WALTER A. GENTNER. 6.
The evolutionary significance of the endosperm and its bearing on the origin of angiosperms. HUI-LIN LI. 33.
Two new genera of Compositae from Peru and Costa Rica. S. F. BLAKE. 407.
Chemistry. Chemistry at high pressures and high temperatures. H. TRACY HALL. 300.
* Stabilization of free radicals at low temperatures. H. P. BROIDA. 30.
Editorial. The role of the civil engineer. 205.
Engineering. Civil-engineering research. G. E. BURNETT. 206.
The dual role of engineering mechanics. CARL H. WALTHER. 229.
The role of the civil engineer in applied economics. SAMUEL H. GALE. 235.
The role of the civil engineer in highways. JAMES O. GRANUM. 222.
The role of the civil engineer in hydraulics. C. C. MCDONALD. 211.
The role of the civil engineer in irrigation. F. E. BYRNS. 215.
The role of the civil engineer in power. HARRISON G. ROBY. 238.
The role of the civil engineer in soil mechanics. EDWARD S. BARBER. 218.

The role of the civil engineer in surveying and mapping. GEORGE D. WHITMORE and MORRIS M. THOMPSON. 241.
The role of the civil engineer in structures. JOHN G. SWOPE. 226.
Entomology. Cockroach egg case from the Eocene of Wyoming. ROLAND W. BROWN. 340.
The stridulations of some crickets in the Dominican Republic. H. A. ALLARD. 150.
Type specimens of mosquitoes in the United States National Museum: IV, The genus *Culex* (Diptera, Culicidae). ALAN STONE and KENNETH L. KNIGHT. 42.
Type specimens of mosquitoes in the United States National Museum, V: The Sabethini (Diptera, Culicidae). ALAN STONE and KENNETH L. KNIGHT. 117.
Type specimens of mosquitoes in the United States National Museum: VI, Miscellaneous genera, addenda, and summary. ALAN STONE and KENNETH L. KNIGHT. 196.
General science. Cultural implications of scientific research. R. E. GIBSON. 249.
Genetics. Tradition and conceptive selection. JOHN A. O'KEEFE. 273.
Geology. A study of the montmorillonite variety galapektite. GEORGE T. FAUST. 143.
The relation between lattice parameters and composition for montmorillonite-group minerals. GEORGE T. FAUST. 146.
Geophysics. * The International Geophysical Year program of the United States. JOSEPH KAPLAN. 26.
Herpetology. A new name for the race-runner lizard of the Middle Atlantic States (Tejidae). RICHARD L. HOFFMAN. 423.
A new subspecies of the teiid lizard *Cnemidophorus sexlineatus* (Linnaeus) from eastern United States. RICHARD L. HOFFMAN. 153.
Contributions to the herpetofauna of Virginia, 2: The reptiles and amphibians of Northern Neck. CLYDE F. REED. 21.
Contributions to the herpetology of Maryland and Delmarva, 12: The herpetofauna of Anne Arundel County, Md. CLYDE F. REED. 64.
Contributions to the herpetology of Maryland and Delmarva, 15: The herpetofauna of Somerset County, Md. CLYDE F. REED. 127.
Contributions to the herpetology of Virginia, 3: The herpetofauna of Accomac and Northampton Counties, Va. CLYDE F. REED. 89.
Descriptions of two new frogs from Colombia. COLEMAN J. GOIN. 60.
History of science. Alexander Dallas Bache—pioneer American scientist. A. L. SHALOWITZ. 267.
Ichthyology. A key to the species and subspecies of the cyprinodont genus *Fundulus* in the United States and Canada east of the continental divide. JERRAM L. BROWN. 69.
Malacology. The subgenus *Halopsephus* Rehder, with notes on the Western Atlantic species of *Turbo* and the subfamily Bothropomatinae Thiele. ROBERT ROBERTSON. 316.
Mathematics. A determinantal inequality of H. P. Robertson, I. OLGA TAUSSKY. 263.
A determinantal inequality of H. P. Robertson, II. MARVIN MARCUS. 264.
A matrix minimization problem. A. J. GOLDMAN. 405.
A note on values of a quadratic form. M. MARCUS. 97.
Some properties of Struve functions. RICHARD K. COOK. 365.
Meteorology. * Aircraft instrumentation and recorders for hurricane investigation. R. H. SIMPSON. 27.
Mycology. Two medium-sized species of *Conidiobolus* occurring in Colorado. CHARLES DRECHSLER. 309.
Notes and news. Academy members in the news, 5; Protective coatings for titanium, 9; Awards for scientific achievement, 10; Emission spectra of actinium, 40; Employment profile of scientists, 1954–55, 63; Free radicals research program, 67; Army ants, 68; News of members, 77; Wind River fossils, 83; Plant-growth "brake," 88; The australopithecines, 92; Scent language of honey bees, 93; Reversal of parity law in nuclear physics, 94; Guaymí "medicine," 96; Junior Academy excursion, 99; Chiggers, 108; Weight of meteorite, 116; Porosity detection in plated coatings, 128; Fire detection in aircraft engine spaces, 129; Genetics in the service of man, 130; River Basins archeology, 131; Solar corona, 132; Economy in planning of experiments, 148; Member honors, 152; Habits of hornbills, 168; Functional organization of human brain, 194; Seminole legends, 195; Crystal chemistry of tooth and bone mineral, 202; Solar furnace, 204; Interstellar matter, 214; Radio stars, 217; Structure of galaxies, 246; Solar heating systems, 246; Research on viruses, 247; Crustacean metamorphosis, 248; Experimental standard frequency broadcast on 60 kilocycles, 278; Double stars, 279; Language of the Guaymí, 280; The grasses of Washington, 299; "Terrible lizards," 320; The Washington History of Science Club, 329; Wood-boring beetles, 339; Entomology in World War II, 353; Faunal curiosities of Cuba, 356; Catalyst for parahydrogen production simplifies liquid hydrogen storage problem, 362; Standard musical pitch, 377; Dr. Kiess retires, 392; War on lice, 406; New light on the Adena people, 424.
Paleontology. Morphology and taxonomy of the foraminiferal family Elphidiidae. MARY WADE. 330.
New genera of Early Cretaceous ammonites from California and Oregon. RALPH W. IMLAY. 275.
Notes on the ostracode subfamily Cytherideidinae Puri, 1952. HARBANS S. PURI. 305.
Postscript notes on the ostracode subfamily Brachycytherinae. HARBANS S. PURI. 306.
Two aberrant crinoid specimens. HARRELL L. STRIMPLE. 369.
Woodringina, a new foraminiferal genus (Heterohelicidae) from the Paleocene of Alabama. ALFRED R. LOEBLICH, JR., and HELEN TAPPAN. 39.
Physics. * Elasticity of rubber. LAWRENCE A. WOOD. 25.
Global distribution of radioactivity from nuclear detonations, with special reference to strontium 90. MERRIL EISENBUD. 180.
* High speed gas dynamics. Z. I. SLAWSKY. 28.
Immediate radiations from nuclear detonation. GORDON DUNNING. 189.

Meteorological factors affecting spread of radioactivity from nuclear bombs. LESTER MACHTA. 169.

* Temperatures in atomic explosions. F. G. BRICKWEDDE. 29.

The elasticity of rubber. LAWRENCE A. WOOD. 281.

* The mechanism of quantum sensitivity. GEORGE WALD. 32.

Physiology. On the quantum efficiency of scotopic and photopic vision. R. CLARK JONES. 100.

Studies on the oxygen consumption of *Australorbis glabratus* eggs. ALINA PERLOWAGORA-SZUMLEWICZ and THEODOR VON BRAND. 11.

The electrogram of the turtle heart in situ and after isolation. ROLAND M. NARDONE. 109.

The quantum character of light and its implications on visual thresholds. ERNEST BAUMGARDT. 133.

Plant physiology. Physiological effects of certain fungitoxic compounds on fungus cells. HUGH D. SISLER and NORTON L. MARSHALL. 321.

Science education. * Science and the secondary schools. JOHN R. MAYER. 25.

Statistics. Some considerations of disaster potential. WALTER S. DIEHL. 398.

Zoology. Additional records of Western Atlantic octocorals. FREDERICK M. BAYER. 379.

A new *Garibius* from Virginia, with a key to the North American congeners (Chilopoda: Lithobiomorpha: Lithobiidae). R. E. CRABILL, JR. 375.

A new polychaetous annelid of the family Paraonidae from the North Atlantic. MARIAN H. PETTIBONE. 354.

Another sea anemone from California and the types of certain Californian anemones. CADET HAND. 411.

A redescription of two parasitic copepods from Bermuda. HARRY C. YEATMAN. 346.

Emendation of the foraminiferal genus *Palmerinella* Bermudez, 1934, and erection of the foraminiferal genus *Helenia*. J. B. SAUNDERS. 370.

North American genera of the family Orbiniidae (Annelida: Polychaeta), with descriptions of new species. MARIAN H. PETTIBONE. 159.

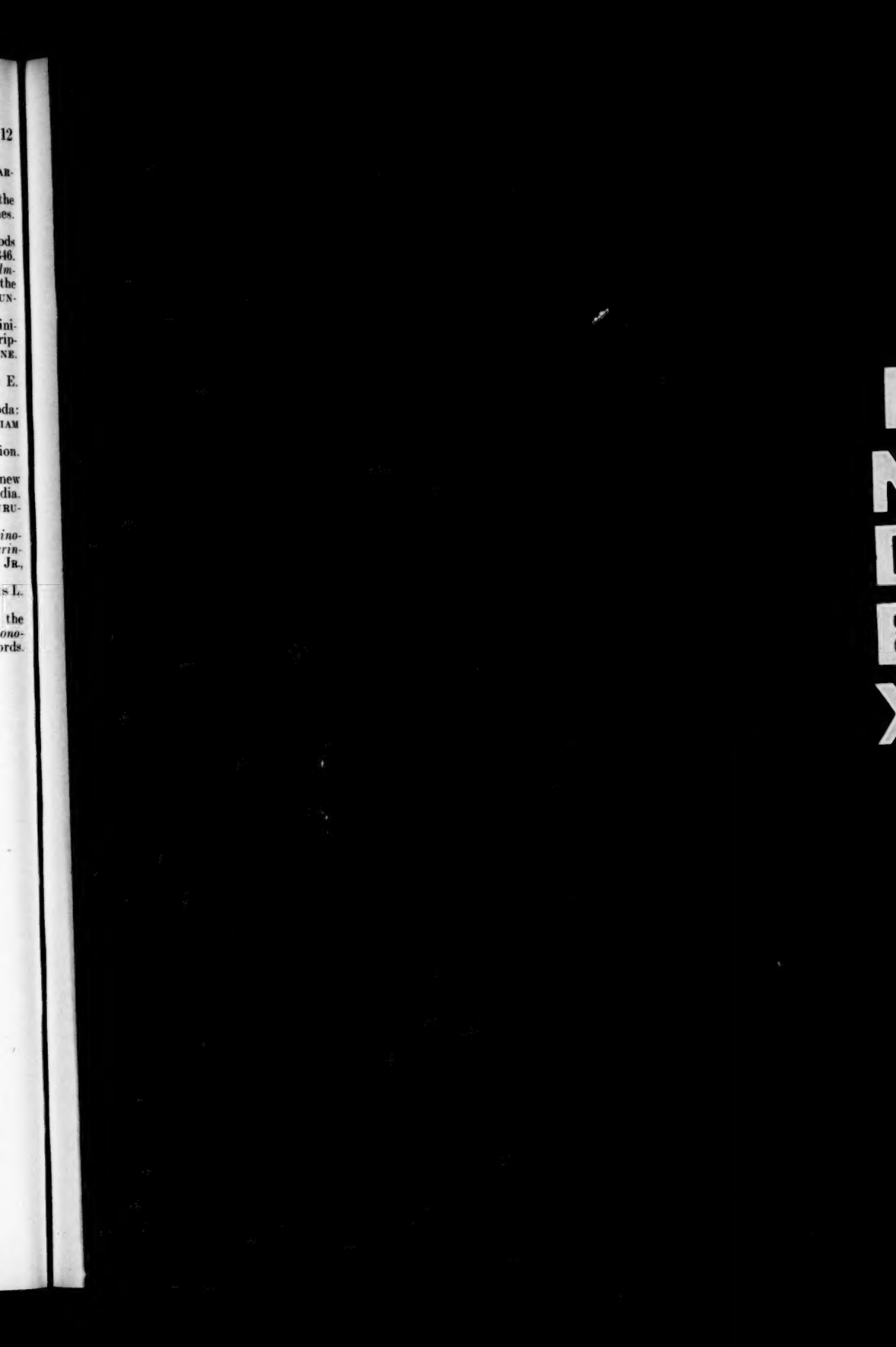
On the Newport chilopod genera. RALPH E. CRABILL, JR. 343.

Some exotic terrestrial isopods (Isopoda: Oniscoidea) from New York State. WILLIAM B. MUCHMORE. 78.

Spongilla discoides Penney: A correction. JAMES T. PENNEY. 24.

Teredo (Nototeredo) nambudalaiensis, a new shipworm from the Madras coast of India. N. BALAKRISHNAN NAIR and O. N. GURUMANI. 157.

The new planktonic foraminiferal genus *Tinophodella*, and an emendation of *Globigerinita* Bronnimann. ALFRED R. LOEBLICH, JR., and HELEN TAPPAN. 112.

The Ostracoda of Great Slave Lake. WILLIS L. TRESSLER. 415.

The systematics, affinities, and hosts of the one-tentacled, commensal hydroid *Monobrachium*, with new distributional records. CADET HAND. 84.